

N^o 16,736



A.D. 1901

Date of Application, 20th May, 1901

Complete Specification Left, 12th May, 1902—Accepted, 3rd July, 1902

PROVISIONAL SPECIFICATION.

"A Process and Apparatus for the Gasification of Disinfecting Media."

I, DR. BENJAMIN SIEBER, of the Chemical Factory, Attisholz near Solothurn, Switzerland, do hereby declare the nature of this invention to be as follows:—

It is generally known that disinfecting media work more effectively, the more finely dispersed they are used; further that in the formaldehyde a considerable
5 quantity of moisture is necessary in order to completely use up the disinfecting force thereof. Those classes of disinfecting apparatus which only effect a dry vapourising of the fixed formaldehyde are it is true convenient to handle, but they do not suffice for an effective disinfection, since the fixed formaldehyde, as is known, with dry warming, only sublimates away for by far the greatest
10 part, and thus deposits itself chiefly as a fine dust on the objects to be disinfected, without penetrating into their pores.

The present invention removes this defect in the following manner; during the vapourisation a continual current of steam plays over the formaldehyde, and this latter is thereby transformed into a gaseous form which is the most
15 effective condition for the purpose, and the disinfection is rendered more complete with less formaldehyde than with dry vapourising.

In carrying the invention into effect as illustrated in the accompanying drawing which shows one convenient form of the apparatus, a vessel *a* is provided carried on three feet, which in practice has a mantel on the upper part for the
20 better utilisation of the heat, and the vessel carries a water boiler *b*, in which there is introduced, gas-tight, on the top, a more or less deep bowl, *f*, for the reception of the formaldehyde. From the bottom of the bowl there leads a sufficiently wide steam pipe *c* which pipe extends from the water boiler up to the upper edge of the bowl. This steam pipe is loosely covered over by another
25 pipe *d* closed on the top, which is somewhat longer than the steam pipe and is pierced or indented at its lower edge *e*. This cap or pipe stands on the bottom of the bowl *f*.

When it is desired to use the apparatus the screw-stopper *h* fitted on the side of the water boiler, is loosened; this stopper denotes the highest level of the
30 water, and the water boiler is filled with water through the steam pipe, until it pours out of the side pipe; the opening is then closed by the screw stopper, and after the cap is placed over the steam pipe, the necessary quantity of disinfecting medium as for instance fluid or fixed formaldehyde, is placed in the bowl *f*, and the water is heated by a spirit or petroleum lamp, *g*, or by any other
35 source of heat, to the boiling point. The steam developed is now compelled after it has first passed through the steam pipe, to enter the inside of the cap near the bottom thereof and to pass through the holes or indents and thus to penetrate the disinfecting medium. By means of the warmth of the water boiler and the permeating steam, the disinfecting medium is vapourised and
40 completely fills up, in a gaseous form, the space to be disinfected.

Should the development of steam become too violent through too strong a heat, so that pressure arises in the water boiler, then the cap rises and the steam can freely escape. Thus the cap serves at the same time as a safety valve.

[Price 8d.]

Sieber's Process and Apparatus for the Gasification of Disinfecting Media.

The apparatus may be varied in its details without departing from the essential features of the invention.

Dated this 20th day of August, 1901.

MARKS & CLERK,
18, Southampton Buildings, London, W.C. 5
13, Temple Street, Birmingham, and
25, Cross Street, Manchester,
Agents.

COMPLETE SPECIFICATION.

A Process and Apparatus for the Gasification of Disinfecting Media 10

I, Dr. BENJAMIN SIEBER, of the Chemical Factory, Attisholz near Solothurn, Switzerland, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

It is generally known that disinfecting media work more effectively, the more 15
finely dispersed they are used; further that in the formaldehyde a considerable quantity of moisture is necessary in order to completely use up the disinfecting force thereof. Those classes of disinfecting apparatus which only effect a dry vapourising of the fixed formaldehyde are it is true, convenient to handle, but they do not suffice for an effective disinfection, since the fixed formaldehyde, 20
as is known, with dry warming, only sublimates away for by far the greatest part, and thus deposits itself chiefly as a fine dust on the objects to be disinfected, without penetrating into their pores.

The present invention removes this defect in the following manner; during the vapourisation a continual current of steam plays over the formaldehyde, 25
and this latter is thereby transformed into a gaseous form which is the most effective condition for the purpose, and the disinfection is rendered more complete with less formaldehyde than with dry vapourising.

In carrying the invention into effect as illustrated in the drawing filed with the Provisional Specification which shows one convenient form of the apparatus, 30
a vessel *a* is provided carried on three feet, which in practice has a mantel on the upper part for the better utilisation of the heat, and the vessel carries a water boiler *b*, in which there is introduced, gas-tight, on the top, a more or less deep bowl, *f*, for the reception of the formaldehyde. From the bottom of the bowl there leads a sufficiently wide steam pipe *c* which pipe extends from 35
the water boiler up to the upper edge of the bowl. This steam pipe is loosely covered over by another pipe *d* closed on the top, which is somewhat longer than the steam pipe and is pierced or indented at its lower edge *e*. This cap or pipe stands on the bottom of the bowl *f*.

When it is desired to use the apparatus the screw-stopper *h* fitted on the side 40
of the water boiler, is loosened; this stopper denotes the highest level of the water, and the water boiler is filled with water through the steam pipe, until it pours out of the side pipe; the opening is then closed by the screw stopper, and after the cap is placed over the steam pipe, the necessary quantity of disinfecting medium as for instance fluid or fixed formaldehyde, is placed in the 45
bowl *f*, and the water is heated by a spirit or petroleum lamp, *g*, or by any other source of heat, to the boiling point. The steam developed is now compelled after it has first passed through the steam pipe, to enter the inside of the cap near the bottom thereof and to pass through the holes or indents and thus to penetrate the disinfecting medium. By means of the warmth of the water 50

Sieber's Process and Apparatus for the Gasification of Disinfecting Media.

boiler and the permeating steam, the disinfecting medium is vapourised and completely fills up, in a gaseous form, the space to be disinfected.

Should the development of steam become too violent through too strong a heat, so that pressure arises in the water boiler, then the cap rises and the steam can freely escape. Thus the cap serves at the same time as a safety valve.

The apparatus may be varied in its details without departing from the essential features of the invention.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is:—

1.—A process for the vapourising of disinfecting media, such as formaldehyde and the like, characterised in this, that steam is allowed to flow through the same.

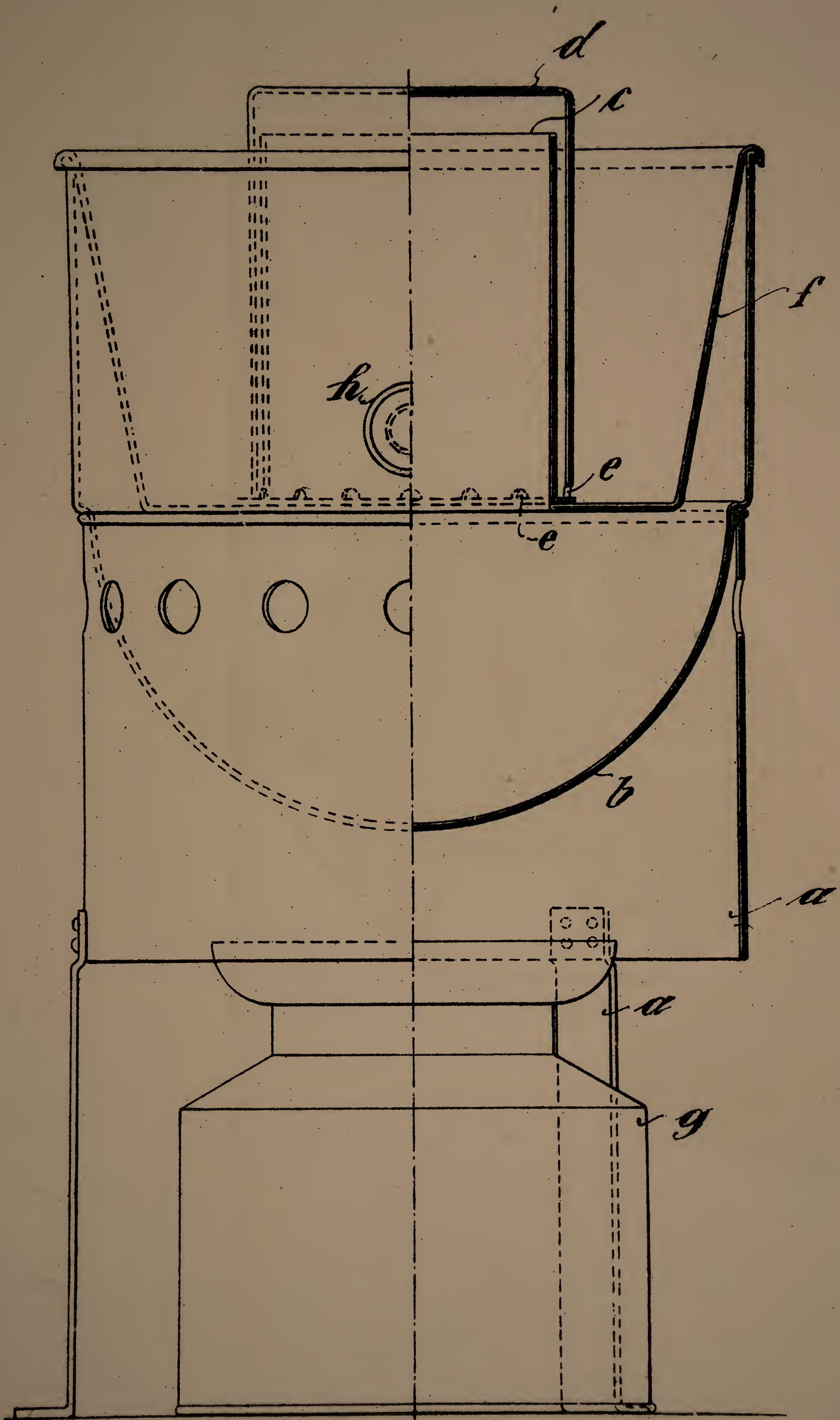
2.—An apparatus for carrying out the process claimed in the first claim consisting of a water boiler, in which a bowl is provided and is made steam-tight for the reception of the disinfecting medium, and in which is placed a steam pipe provided with a metal cap, the metal cap having holes or slots at its lower edge through which the steam enters into the disinfecting medium, the cap serving at the same time as a safety valve substantially as described.

3.—The improved process and apparatus for the vapourisation of disinfecting media, as hereinbefore described and as illustrated in the drawings.

Dated this 12th day of May 1902.

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[This Drawing is a full-size reproduction of the Original.]

